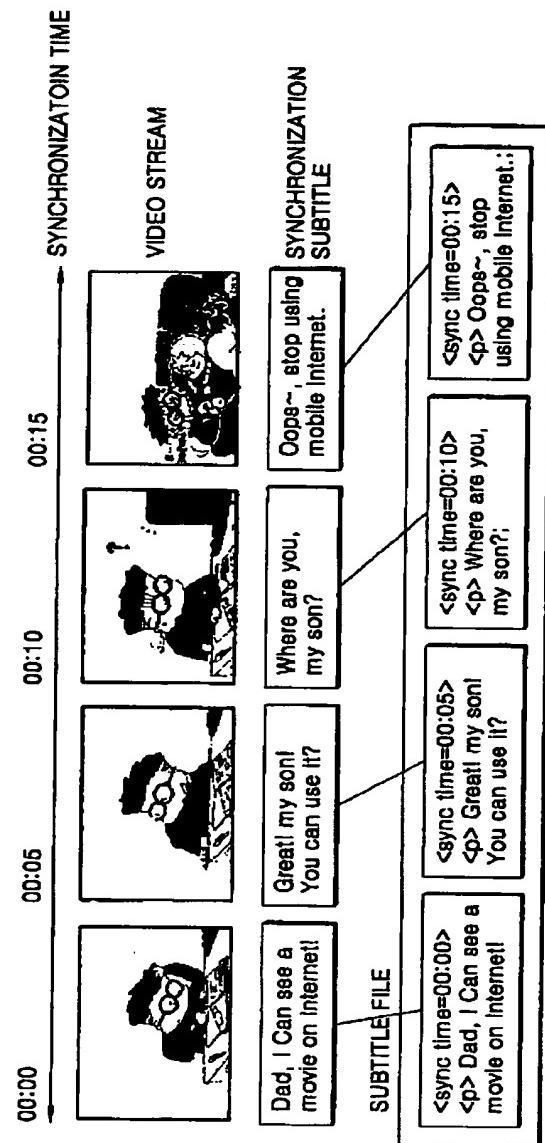


FIG. 1



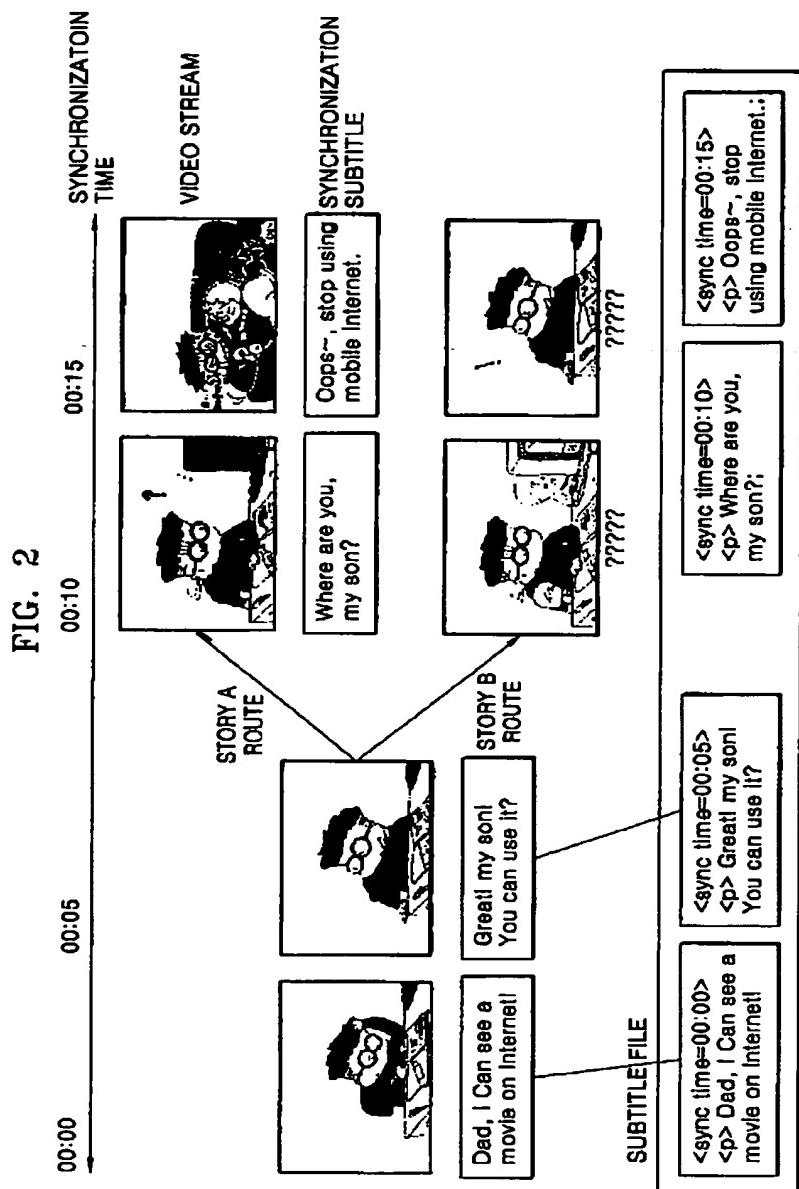


FIG. 3

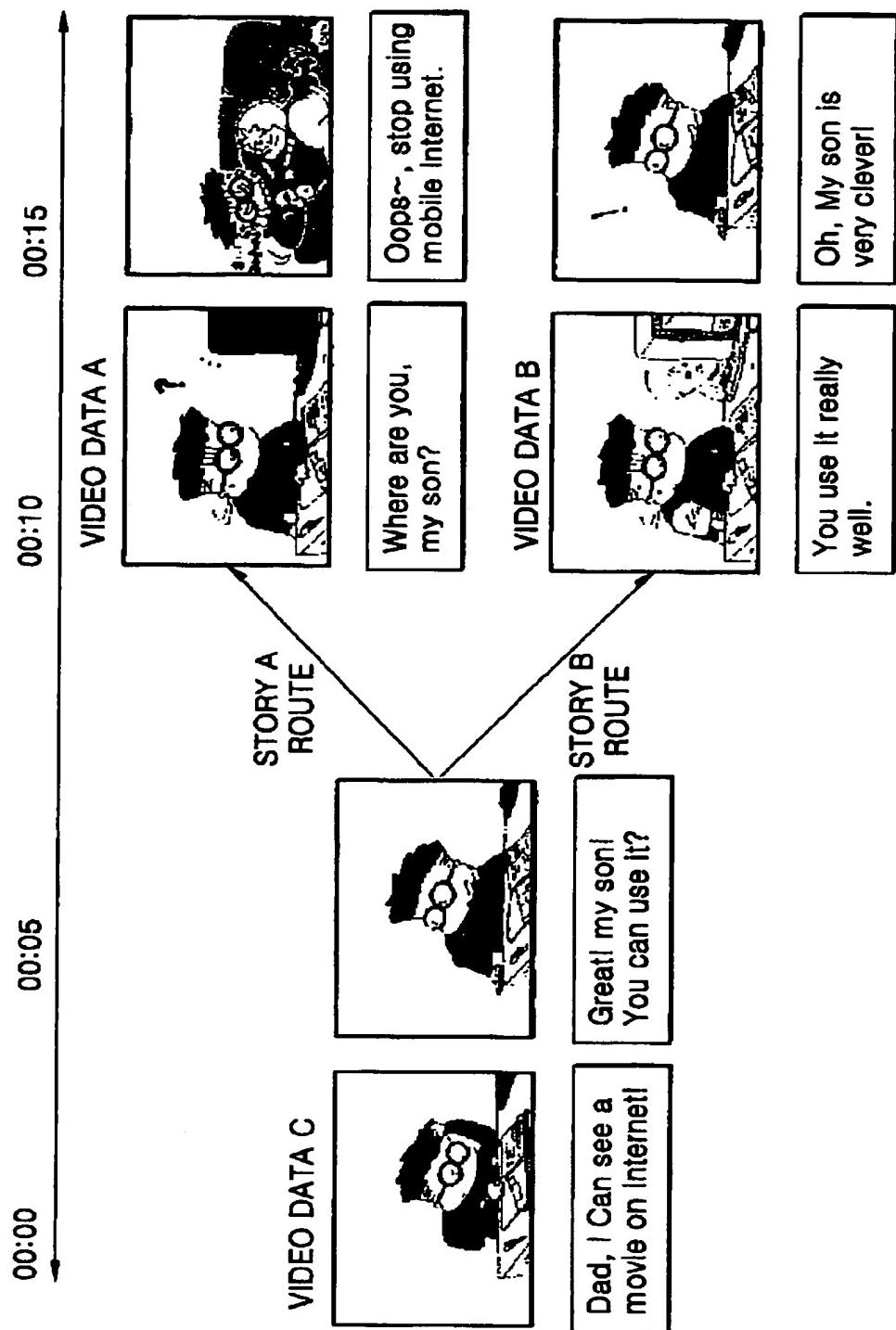


FIG. 4

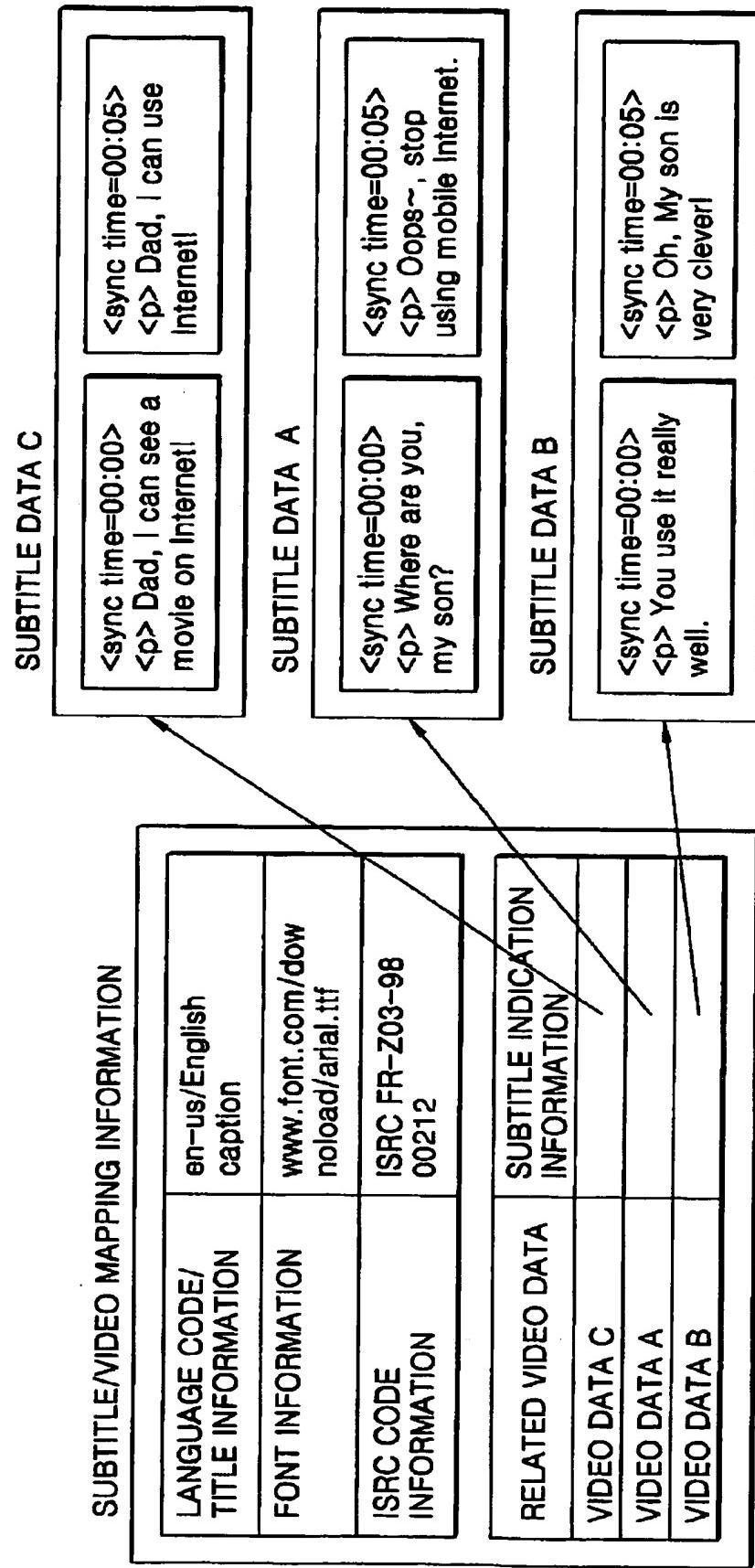


FIG. 5

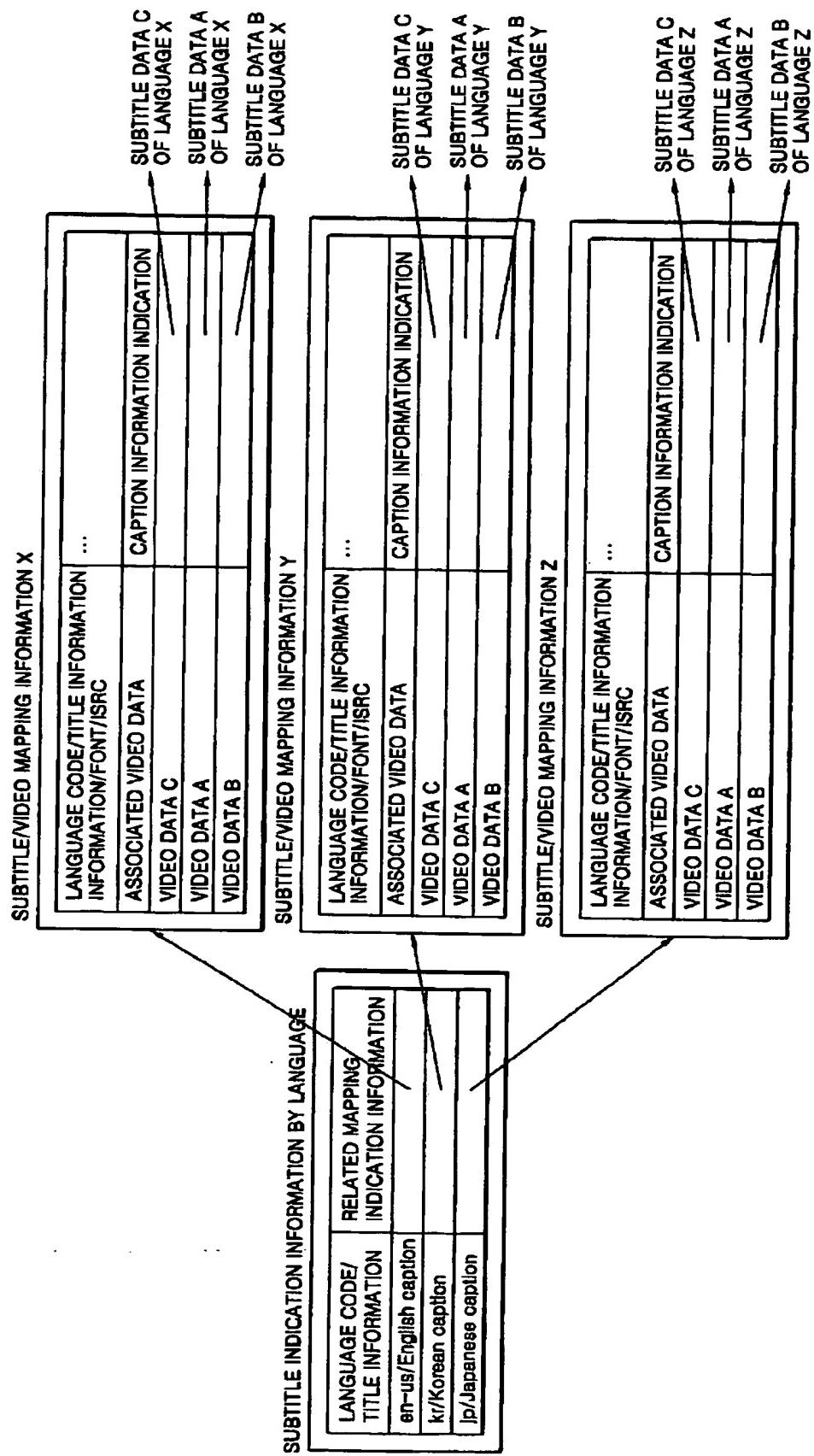
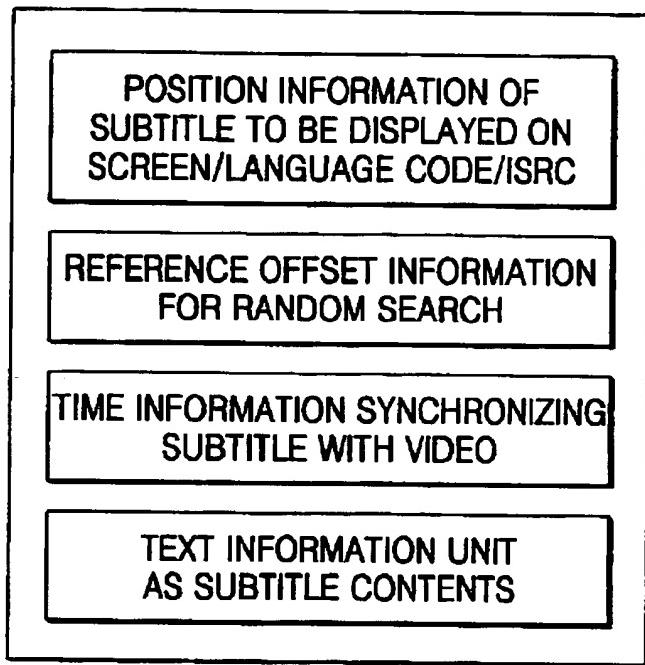
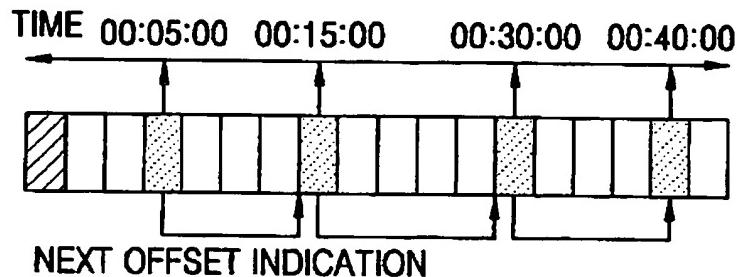


FIG. 6**SUBTITLE DATA****FIG. 7**

- POSITION INFORMATION OF SUBTITLE TO BE DISPLAYED ON SCREEN/LANGUAGE CODE/ISRC
- REFERENCE OFFSET INFORMATION FOR BEGINNING TO DISPLAY SUBTITLE
- TIME INFORMATION SYNCHRONIZING SUBTITLE WITH VIDEO/ TEXT INFORMATION UNIT AS SUBTITLE CONTENTS

FIG. 8

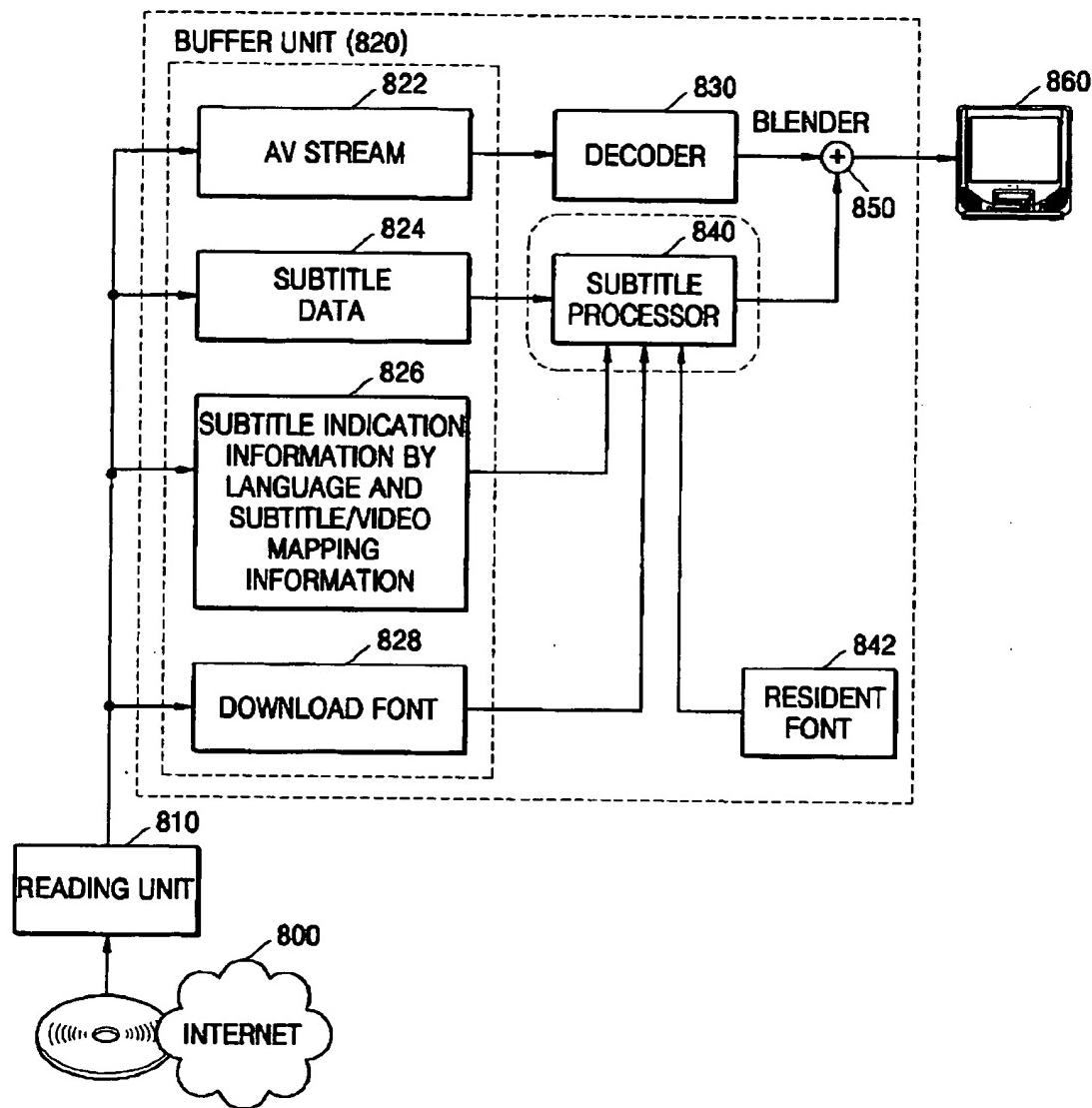


FIG. 9

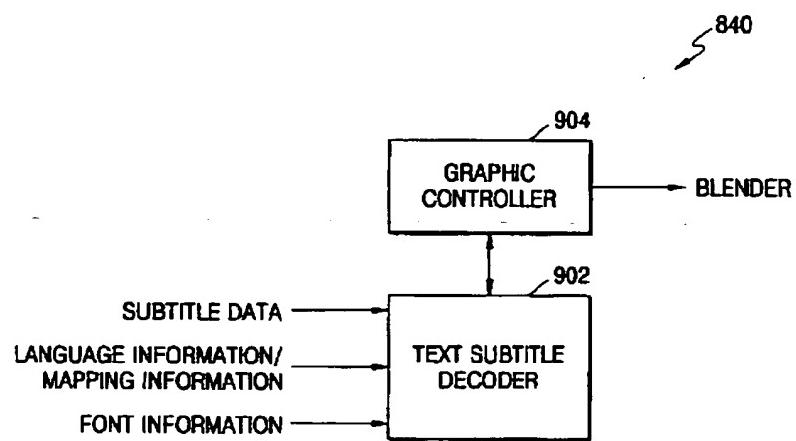


FIG. 10

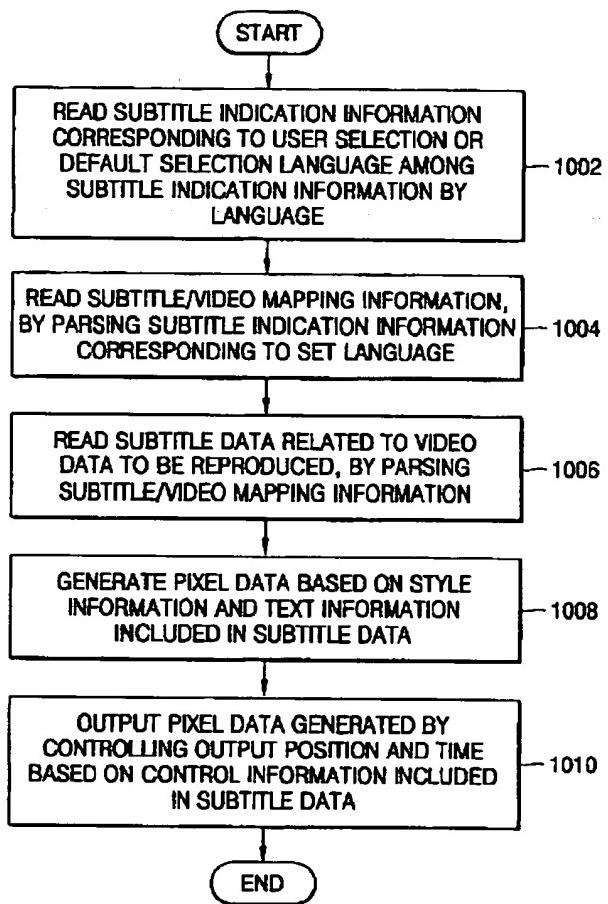


FIG. 11

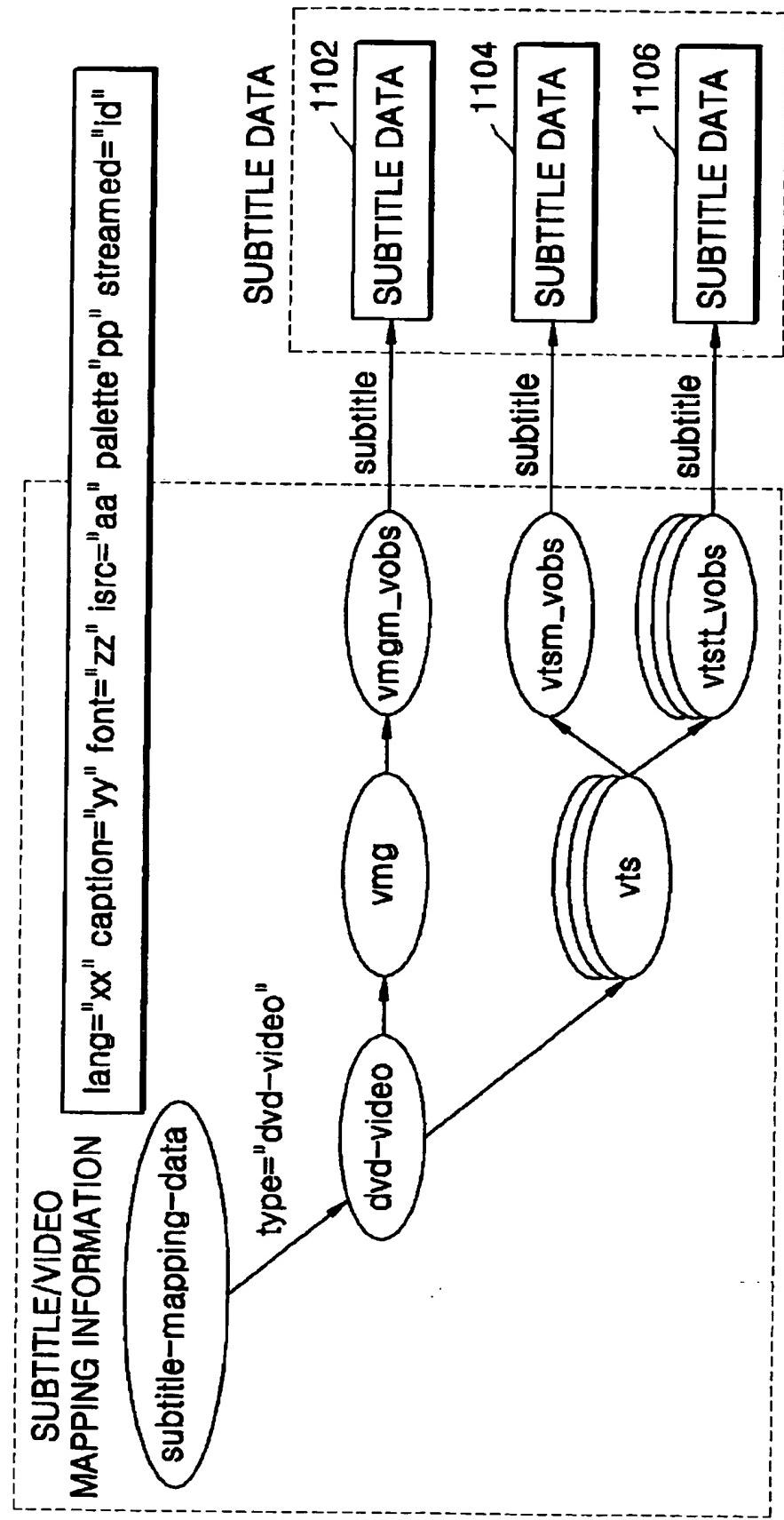


FIG. 12

```
<subtitle-mapping-data type="dvd-video" lang="en-us" caption="English caption"
font="http://www.font.com/download/arial.ttf" lsrc=" ISRC FR-Z03-98-00212"
streamid="32">
<dvd-video>
<palette>
<color index="0" yuv="296ef0" />
<color index="1" yuv="108080" />
<color index="2" yuv="3b8080" />
<color index="3" yuv="668080" />
<color index="4" yuv="918080" />
<color index="5" yuv="bc8080" />
<color index="6" yuv="eb8080" />
<color index="7" yuv="108080" />
<color index="8" yuv="108080" />
<color index="9" yuv="108080" />
<color index="10" yuv="108080" />
<color index="11" yuv="108080" />
<color index="12" yuv="108080" />
<color index="13" yuv="108080" />
<color index="14" yuv="108080" />
<color index="15" yuv="108080" />
</palette>
<vmg>
<vmgm_vobs>
<subtitle vob_idn="1" href="file://english_vmgm.text" /> — 1202
</vmgm_vobs>
</vmg>
<vts idn="1">
<vtsm_vobs>
<subtitle vob_idn="1" href="file://english_vtsm.text" /> — 1204
</vtsm_vobs>
<vtstt_vobs>
<subtitle vob_idn="1-9" href="file://english_tt1vob1.text" />
<subtitle vob_idn="10-49" href="file://english_tt1vob10.text" />
<subtitle vob_idn="50-100" href="file://english_tt1vob50.text" />
</vtstt_vobs>
</vts>
</dvd-video>
</subtitle-mapping-data>
```

FIG. 13

LANGUAGE (EXAMPLE: en-US)		
SUBTITLE TITLE (EXAMPLE: English caption)		
FONT INFORMATION (EXAMPLE, http://www.font.com/download/arial.ttf)		
ISRC (EXAMPLE, ISRC FR-203-98-00212)		
PALETTE INFORMATION		
STREAM ID INFORMATION		
VOBS INDICATION INFORMATION (EXAMPLE, VMGM_VOBS)	VOB INDICATION INFORMATION(1)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file:///english_vmgm.txt) 1302
VOBS INDICATION INFORMATION (EXAMPLE, VTSM_VOBS)	VOB INDICATION INFORMATION(1)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file:///english_vtsm.txt) 1304
VOBS INDICATION INFORMATION (EXAMPLE, VTSTT_VOBS)	VOB INDICATION INFORMATION(1-9)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file:///english_tt1vob1.text)
VOBS INDICATION INFORMATION (EXAMPLE, VTSTT_VOBS)	VOB INDICATION INFORMATION(10-49)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file:///english_tt1vob10.text) 1306
VOBS INDICATION INFORMATION (EXAMPLE, VTSTT_VOBS)	VOB INDICATION INFORMATION(50-100)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file:///english_tt1vob50.text)

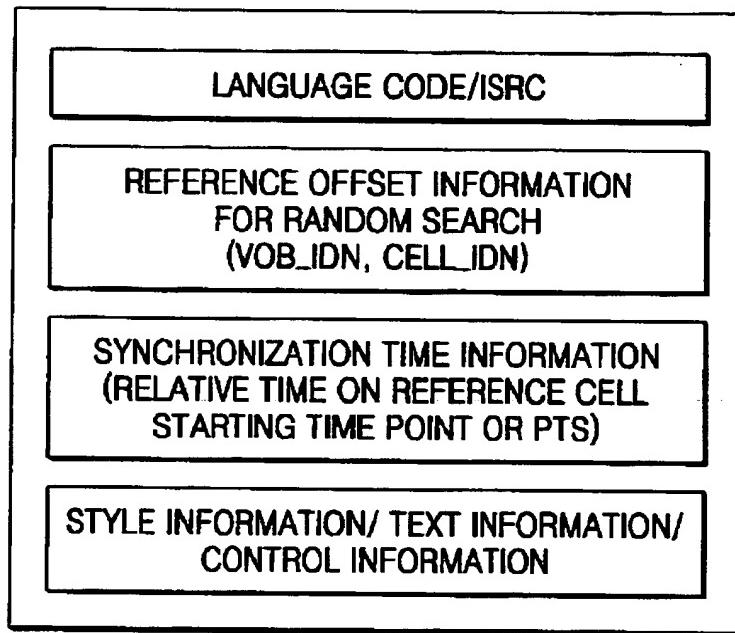
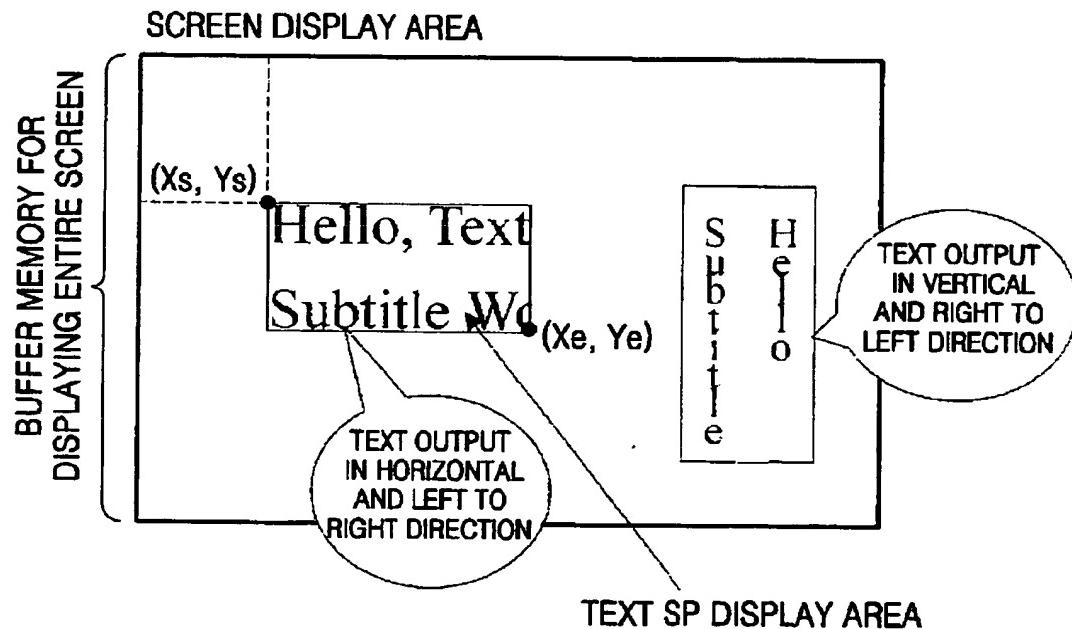
FIG. 14**SUBTITLE DATA****FIG. 15A**

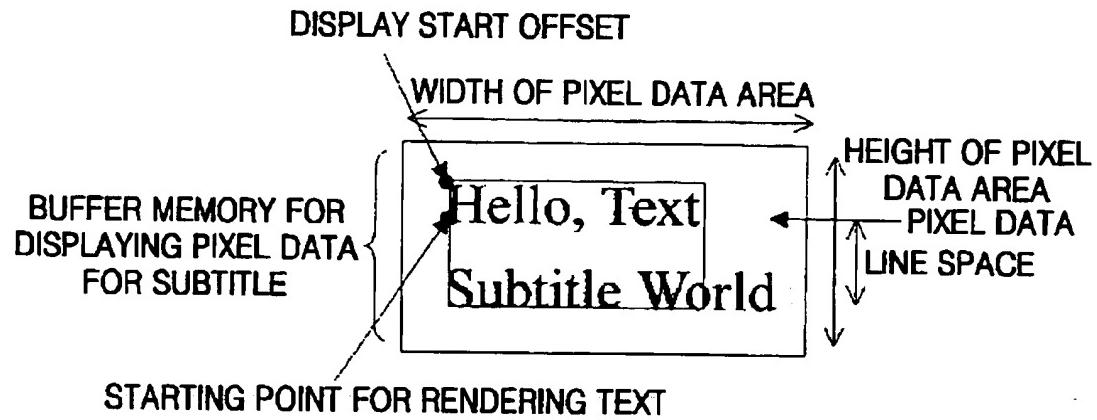
FIG. 15B

FIG. 16

```
<sync-offset value="vob_idn=1-5,cell_idn=1,time=0" next="2000"/>
<text begin="0" end="4999" width="100" height="50" id="1000" color="0"
      opaque="255" start="2000">
    <font color="1" italic="1" size="20px">Dad, I can see<font color="2" bold="1"
      >a movie on </font> Internet!</font></text>
<pixmap begin="3000" end="3500" id="1000" position="100,100,199,149"
      start="0"/>
<pixmap begin="3501" end="4999" id="1000" position="100,100,199,149"
      start="2500"/>
<text begin="5000" end="6999" width="100" height="50" id="1001" line-
      height="30px" color="0" opaque="255" start="2000">
    <font color="1" size="20px">Great!, my son!<br>You can use?</font></text>
<pixmap begin="5500" end="6999" id="1001" position="100,100,199,149"
      start="2500"/>
```

The diagram illustrates the structure of the XML code. It is contained within a large rectangular frame. The code itself is organized into several sections:

- TEXT/STYLE INFORMATION (1602):** This section contains the first `<text>` element, which includes a `` element with a `bold="1"` attribute.
- CONTROL INFORMATION (1604):** This section contains the first `<pixmap>` element and the first `<pixmap>` element with `start="0"`.
- TEXT/STYLE INFORMATION (1606):** This section contains the second `<text>` element, which includes a `` element with a `size="20px"` attribute.
- CONTROL INFORMATION (1608):** This section contains the second `<pixmap>` element and the second `<pixmap>` element with `start="2500"`.

FIG. 17

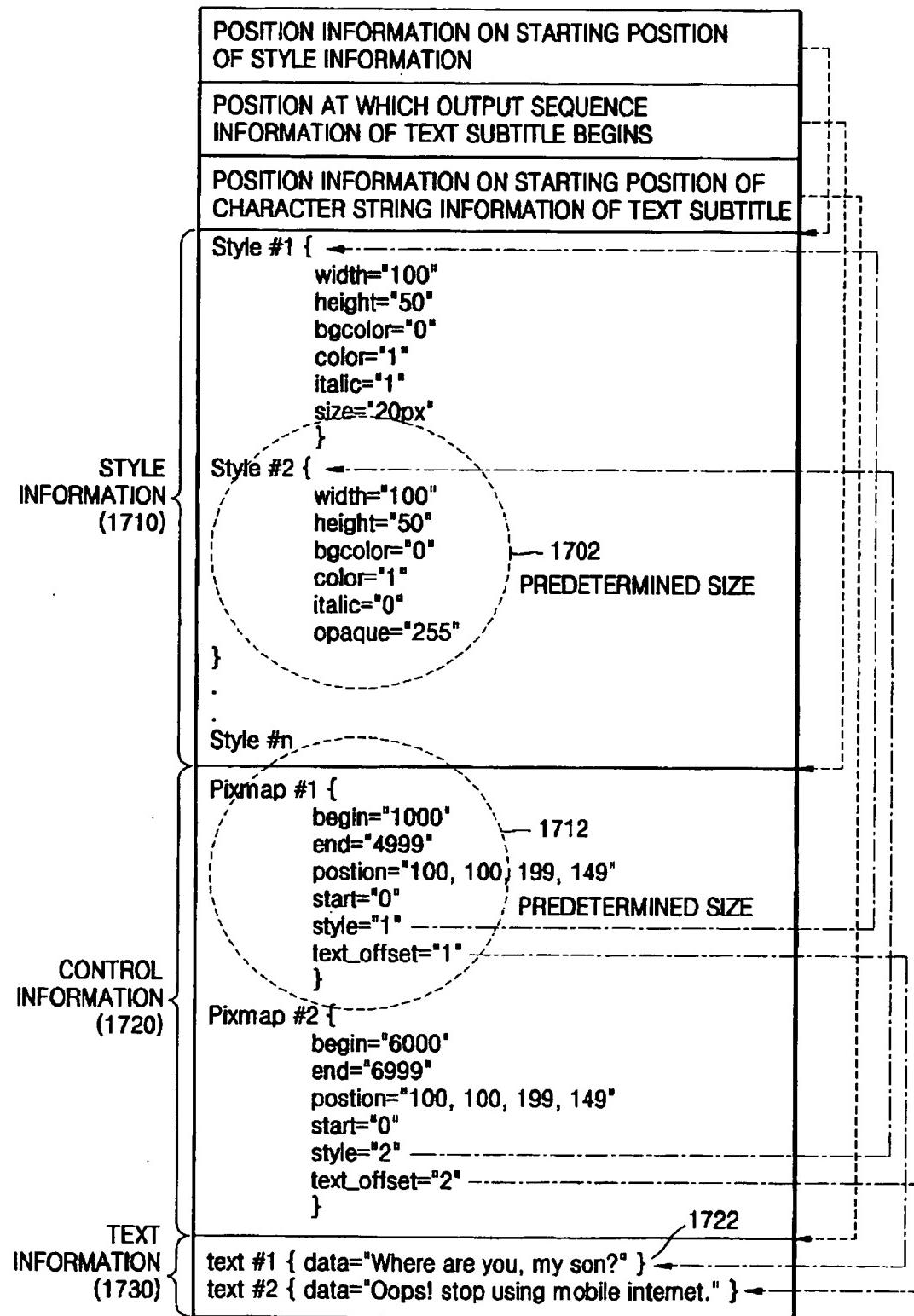


FIG. 18

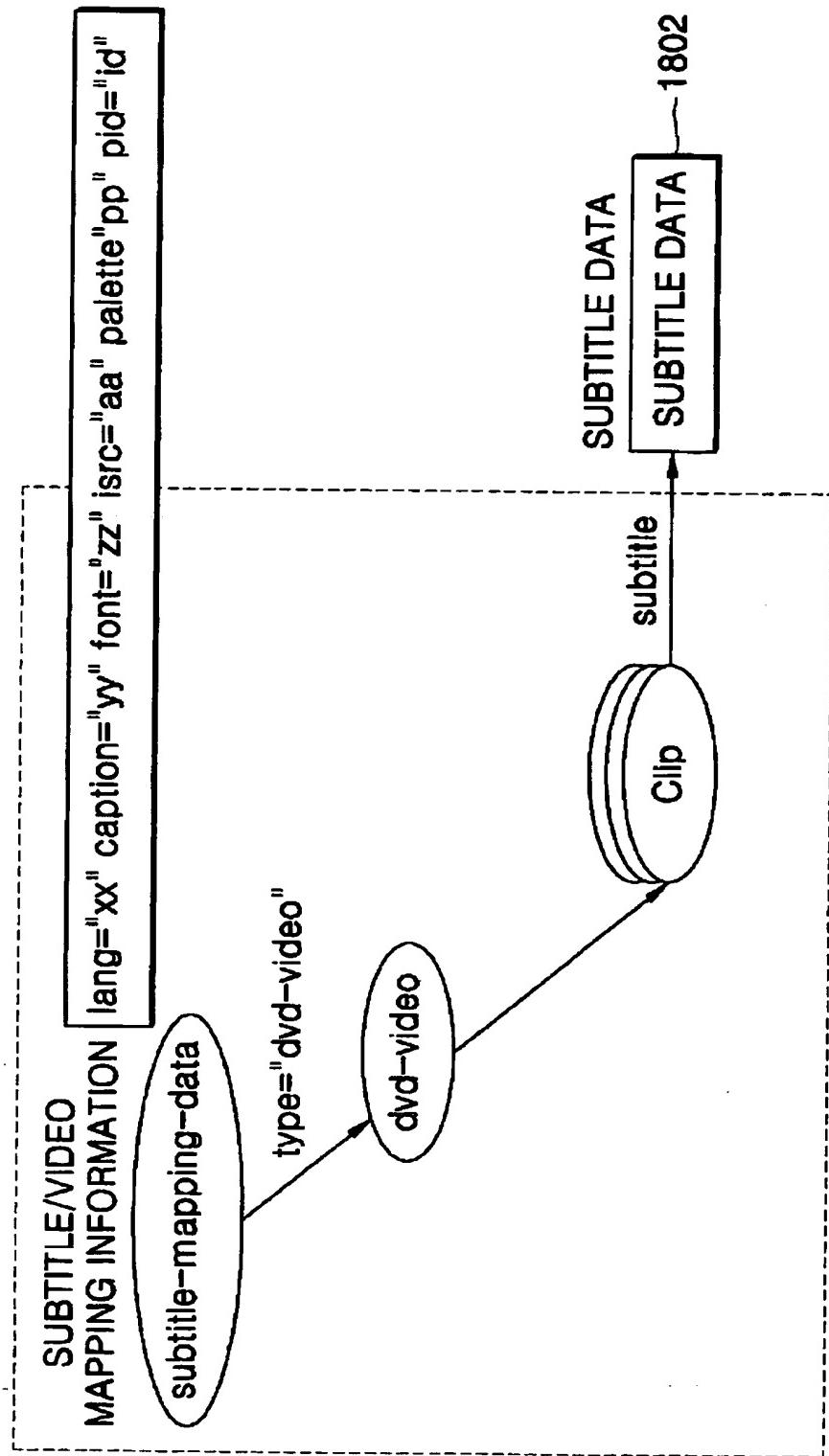


FIG. 19

```

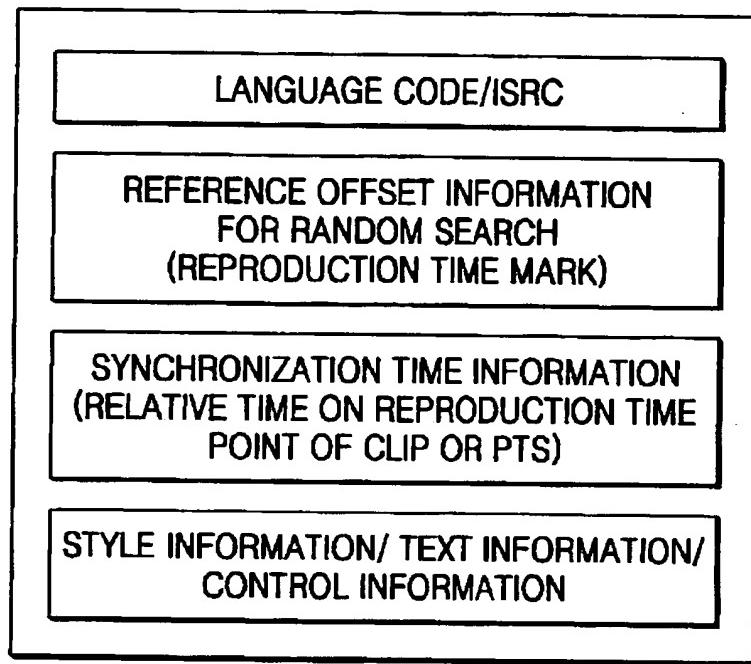
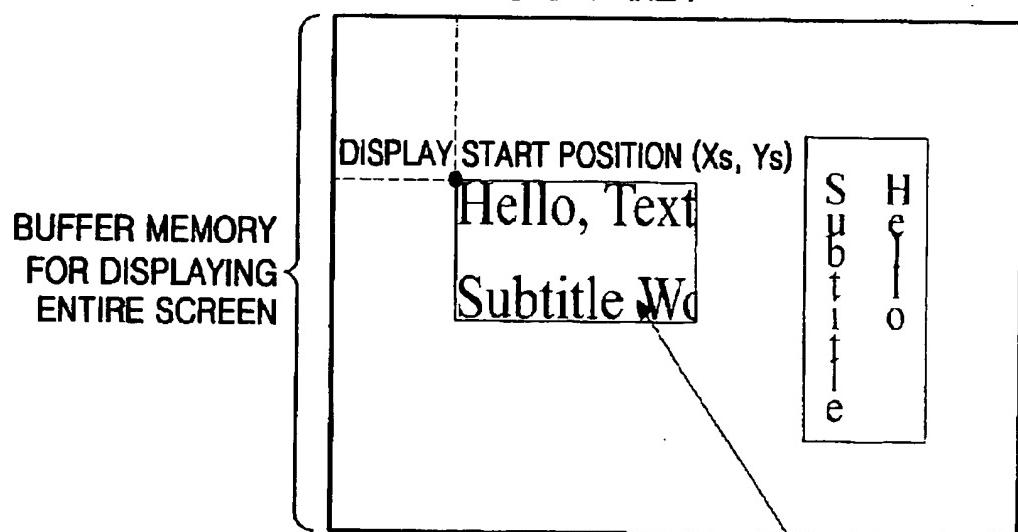
<subtitle-mapping-data type="blu-ray-video" lang="en-us" caption="English caption">
<blu-ray-video>
  font="http://www.font.com/download/arial.ttf" lsrc=" ISRC FR-Z03-98-00212" pid="32">
  <dvd-video>
    <subtitle clip_idn="0001.clip" href="english_0001.text" />
    <subtitle clip_idn="0002.clip" href="english_0002.text" />
    <subtitle clip_idn="0003.clip" href="english_0003.text" />
  </dvd-video>
</blu-ray-video>
</subtitle-mapping-data>

```

FIG. 20

LANGUAGE (EXAMPLE, en-us)	
SUBTITLE TITLE (EXAMPLE, English caption)	
FONT INFORMATION (EXAMPLE, http://www.font.com/downloacd/arial.ttf)	
ISRC (EXAMPLE, ISRC FR-Z03-98-00212)	
PID INFORMATION	
CLIP INDICATION INFORMATION (0001.clip)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file://english_001.text)
CLIP INDICATION INFORMATION (0001.clip)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file://english_002.text)
CLIP INDICATION INFORMATION (0001.clip)	SUBTITLE DATA POSITION INFORMATION (EXAMPLE, file://english_003.text)

} 2002

FIG. 21**SUBTITLE DATA****FIG. 22A****SCREEN DISPLAY AREA**

TEXT SP DISPLAY AREA

FIG. 22B

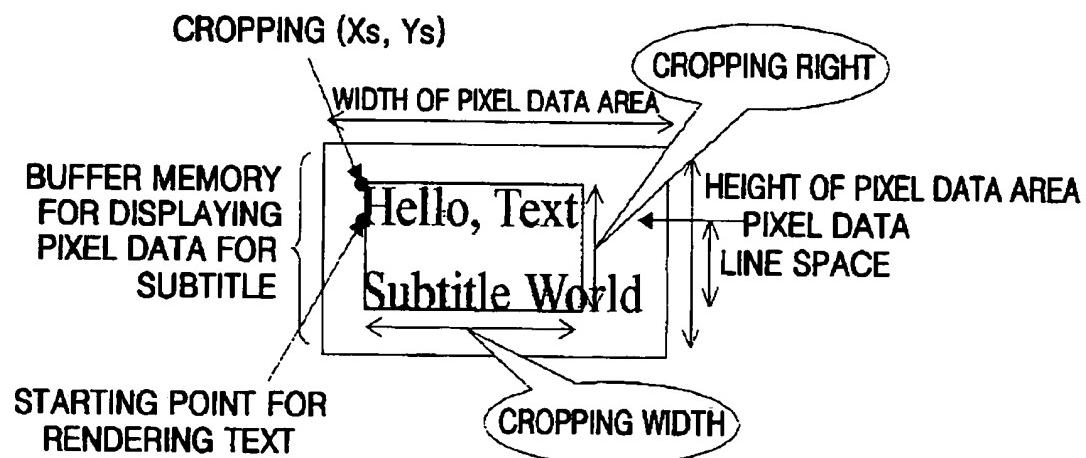


FIG. 23

```

<subtitle-data isrc FR-Z03-98-00212" lang="eb-us">
<sync-offset value="0" next="20000"/>
<palette id="1">
  <color index="0" yuv="296ef0ff"/>
  <color index="1" yuv="108080ff"/>
  <color index="2" yuv="3b8080ff"/>
  <color index="3" yuv="668080ff"/>
  <color index="4" yuv="918080ff"/>
  <color index="5" yuv="bc8080ff"/>
</palette>
<text begin="0" end="4999" width="100" height="5" id="1000" color="0"
start="2000">
<font color="1" italic="1" size="20px">Dad, I can see<font color="2" bold="1"
>a movie on </font> Internet </font></text>
<composition begin="3000" end="4999" palette="1">
<pixmap id="1000" position="100.100" cropping="0.0.100.50"/>
<pixmap id="1000" position="300.300" cropping="0.25.100.25"/>
</composition>
<text begin="5000" end="6999" width="100" height="50" id="1001" line-
height="30px" color="0" start="2000">
<font color="1" size="20px">Great! my son!<br>You can use?</font></text>
<pixmap position="100.100" cropping="0.0.100.50"/>
</composition>
</subtitle-data>

```

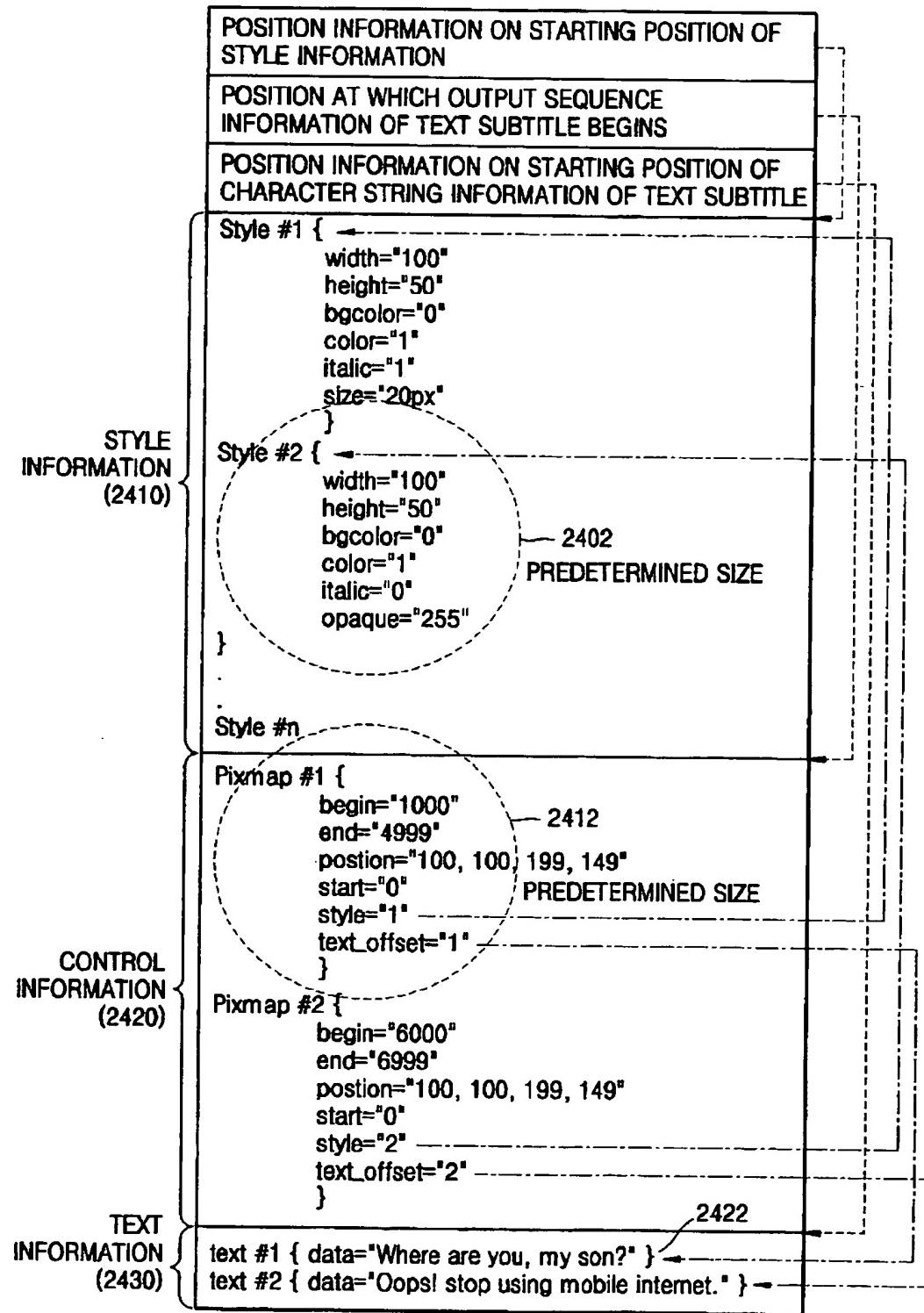
TEXT/STYLE INFORMATION
(2302)

CONTROL INFORMATION
(2304)

TEXT/STYLE INFORMATION
(2306)

CONTROL INFORMATION
(2308)

FIG. 24



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2004/002481

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G11B 20/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G1B 20/10 H04N 5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Patents and applications for inventions since 1975
Korean Utility models and applications for utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
"multi* story or multi* path", "subtitle or subpicture"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/0099464 A1 (YEONG-HEON OH ET AL) 29 May 2003 See the whole document	1-17
A	US 2001/0053280 A1 (KAZUHIKO YAMAUCHI ET AL) 20 Dec 2001 See the whole document	1-17
A	US 6,345,147 B1 (KABUSHIKI KAISHA TOSHIBA) 5 Feb 2002 See the whole document	1-17
A	US 5,497,241 A (TIME WARNER ENTERTAINMENT CO., L.P.) 5 Mar 1996 See the whole document	1-17

Further documents are listed in the continuation of Box C.

See patent family annex.

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- "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 DECEMBER 2004 (21.12.2004)	21 DECEMBER 2004 (21.12.2004)
Name and mailing address of the ISA/KR	Authorized officer
 Korean Intellectual Property Office 920 Dumsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	HAN, Choong Hee  Telephone No. 82-42-481-5700

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